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Agricultural Memorandum No. 352

L P Smith

Cereal Yields and Distribution

The acreage under wheat or barley in 1967 was analysed with respect to the mean countyyields for these crops 1962/63 to 1966/67. The results were as follows:-

Wheat				Barley			
Percentage of farm land under crop		Average yields	Number of counties	Percentage of farm land under crop		Average yields	Number of counties
Range	Mean			Range	Mean		
0-2	0.8	30.1	14	0-5	3.2	27.7	9
2-4	3.4	30.5	10	5-10	6.8	29.7	5
4-7	6.3	31.8	4	10-15	12.1	27.8	9
7-10	9.4	30.4	4	15-20	17.8	29.3	6
10-13	11.3	31.9	7	20-25	21.1	28.8	8
13-16	13.8	31.9	6	25-30	28.0	29.7	5
16-19	17.3	33.2	5	30-35	33.1	28.7	7
Over 19	24.2	34.4	5	Over 35	38.3	29.3	6
Correlation		0.85				0.41	

For wheat, there seems to be a correlation between its choice as a crop and its average yield.

For barley, no such relationship can be deduced from these figures.

In Agricultural Memorandum 351 the cereal acreage was highly correlated to a weather factor deduced for grass. Using the same grades, we find:-

	Wheat Percentage	Average Yield	Barley Percentage	Average Yield
Grade 1	1.7	29.3	9.1	27.3
Grade 2	2.3	32.0	10.2	28.7
Grade 3	6.7	31.0	17.4	28.7
Grade 4	6.5	31.4	22.7	29.0
Grade 5	6.8	31.2	22.8	28.8
Grade 6	12.0	31.1	27.6	28.9
Grade 7	15.2	32.8	30.8	28.9
Grade 8	18.2	34.3	33.6	29.9
Grade 9	24.9	33.9	30.4	30.3
Correlation		0.83		0.78

The weather factor (effective transpiration) was only designed for grass and therefore should not be expected to give a useful guide to yields. This subdivision therefore merely tends to confirm the deductions stated above.

Any comments or suggestions on this paper should be sent to the author.

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